

**National Hydrogen and Fuel Cell
Codes and Standards Coordinating Committee
(NHFCCSCC)**

**Wednesday, August 2, 2017
TIME: 3:00 – 4:00 pm (Eastern Standard Time)**

Minutes

Attendees

**Brent Hartman
Carl Rivkin
Connor Dolan
Elan Bond
Jay Keller
Jennifer Hamilton**

**Karen Quackenbush
Kelvin Hecht
Laura Hill
Marcia Poxson
Nick Barilo
Norm Newhouse**

**Spencer Quong
Stella Papasavva
Will James
Mike Steele**

I. Welcome and Housekeeping Items

- Reviewed FCHEA's anti-trust guidelines - Available on FCHEA's members only website and a copy can be provided to you on request.
- Reviewed the meeting agenda as modified.
- Approved the previous meeting minutes for July 2017.

II. DOE/HQ Update

Laura Hill

DOE FCTO Budget Request for FY2018 – The administration budget is \$45M, House mark \$53M, Senate at \$85M.

H2@Scale Meeting being held on November 7th as part of the Fuel Cell Seminar – more details at www.fuelcellseminar.com.

The FCTO is still proceeding with the lab capability CRADA – looking to provide lab capabilities relevant to the H2@Scale activities. Discussed at the AMR and more information is available from Sunita's slides at the AMR.

III. C&S Events and Fuel Cell Safety Information

http://www.fuelcellstandards.com/calendar_new.html

Kelvin Hecht

<http://www.hydrogenandfuelcellsafety.info/events/>

Karen Quackenbush

Request: technical resource updates for the Hydrogen and Fuel Cell Safety website. Any committee members who have materials they would like hosted on the website can send them to Karen Quackenbush (khall@fchea.org) or Connor Dolan (cdolan@fchea.org).

Request: Please notify Karen or Connor of any meetings / events to add to the calendar.

Need to add the following:

ISO TC 197 - Hydrogen Quality Meetings – week of November 13th – tentatively scheduled for Torrance, CA.

December 7-8th – ISO TC 197 Plenary starts in China. Typically there are a series of WG meetings around the plenary (planned 4th – 6th?). Details / confirmation to follow.

IV. Global Technical Regulations

Nha Nguyen

Update provided by Nha in advance of the meeting via email:

- *EU will host the first meeting of phase 2 of the hydrogen and fuel cell vehicles GTR. The meeting is scheduled for October 17-19, 2017, in Brussels.*
- *Please send contact information to Nha Nguyen if you would like to participate.*
- *It's advisable that the participants are members of a sanctioned organization such as standard organizations like SAE, ISO...; auto industry such as OICA or Auto Alliance...; or equipment manufacturers such as tank manufacturers.*

V. Codes and Standards Organization Updates

IEC TC 105

Kelvin Hecht

- Administrative
 - Dr. Ueno is resigning as TC105 chairman
 - Nominated as his successor:
 - Toshiki Shimizu (Panasonic), the current Convener of WG7, *Portable Fuel Cell Power Systems*
 - Laurent Antoni, Chair of French TC105 Committee
 - US supported Antoni (*by one vote*)
- WG 3 Stationary Fuel Cell Power Systems
 - Finalizing draft for submittal as CDV
 - Resigning as chair
 - Nominated Steve Maurer, FCE
- WG 8 Micro Fuel Cells – Safety
 - Call for national committees to review membership in anticipation of renewed activity

ISO/TC 197

Glenn Scheffler/Jay Keller

Jay Keller – WG 24 – Station document moving ahead. Meeting in CT in September to review the current set of comments (out for comment now). Moving towards completion DIS by end of calendar year.

US TAG had meeting this morning on tank standard. Opinion that in good shape, TAG meeting reviewed large number of comments, a lot of which were technical, voted to not pursue forward at this time in order to review the comments. Working to be careful in not slowing down, while being correct.

NFPA 2

Susan Bershad

Cark Rivkin – The NFPA 2 committee completed first draft review work in beginning of April, now editorial staff is assembling extensive input to create the first ballot. Will be coming out in near-future. If have interest in what some of the changes are proposed, can access through NFPA website. The second draft meeting will be held to review input after results of ballot are published will be in August/September of next year – document is in 2020 revision cycle.

Karen Quackenbush – NFPA 55 is on the same cycle.

ICC

Bob Davidson

Nothing to report at this time. Process just completed for last round.

CSA

Sara Marxen

Brent Hartman – US Committee week October 23rd in Cleveland.

HGV 4.3 – meeting today (joint meeting with SAE interface WG) two more meetings planned for August to incorporate J2601 changes. Goal is industry/public review in September.

CHMC 2 – is in meeting monthly now, next meeting planned for end of August. Will also meet during US Committee week.

SAE

Mike Steele

Meetings in November – will be held in Troy. Because of other meetings in Southern California around that timeframe, will work to move the meeting to Southern California.

2601 and 4.3 meeting held today. Discussed issues and will work out.

2719-1 - hydrogen fuel quality specification guideline affirmation ballot was approved. The document is with the publishing group and hope to be out by September meeting.

ASTM

Jennifer Hamilton

Working to schedule call to discuss next setps for two IOSs (cavity ring down and FTIR) – new technical contact for FTIR and technical ring for cavity ring down. Working to be more efficient with those samples. In person meeting held in June. Went through the results of ballot and went smoothly. Talk about a workshop on a cleaning standard was brought up for potential next year.

ASME

John Bendo

Action item: contact John for a report next month.

VI. Discussion Topics

Facilitating Deployment

Carl Rivkin

Webinar on permitting hydrogen fueling stations scheduled for August 22nd. Three or four major topics associated with permitting stations will be discussed.

1. Code development - how we developed these codes/standards and how DOE supported their development.
2. The tools that DOE has supported the development of for permitting. Orange County Fire Authority introductory video as an example.
3. Where we are now – station deployment status. Standardized station design and national code for hydrogen technologies in NFPA 2.

H₂USA Activities

Karen Quackenbush

Joint regulations Task Group – met by webinar in July. Several standards and codes require low resistivity fueling pad, including NFPA 2, SAE, ISO - this requirement comes from requirements for gasoline, but may not be necessary for gaseous fuels. We are conducting a literature search in advance of the next meeting that may require cooperation, additional data, or code changes.

Bob Boyd – background on this – came up in ISO WG -1 for station. The issue is that when you have gasoline dispensing, have known problem with static electricity relating to gasoline vapors coming out of dispenser and potential for ignition. With gasoline have a single trigger, whereas in CA have vapor recovery and a dual trigger. Seems like there is no need for this grounding pad for hydrogen even though it is in NFPA 2.

Karen – not proposing any changes at this time, just investigating the issue for potential future revisions.

Carl Rivkin – I remember this requirement being in NFPA codes for a long time. One source that may be helpful is the NFPA group that collects/analyzes data on different types of categories, including those at fueling stations. Those reports go back for some time.

H2FIRST

NREL/SNL

No update at this time.

Regulatory Matrix Review and Comment

Karen Quackenbush

Last update as of June 30, 2017.

<http://www.fchea.org/s/FCHEA-Regulatory-Matrix-markup-June-30-2017-l95k.pdf>

Permitting and Installation of Hydrogen Fueling Stations

Ca Station Implementation

Jennifer Hamilton

29th station is now open in San Ramon.

Working with the city of San Francisco, just conducted a webinar for code officials with the Governor's Office (Gia Vacin) background on hydrogen and resources available.

Tracking station availability (SOSS).

CEC business meeting is coming up and expected to approve the Shell stations, which should complete all of the stations in the last PON.

Ca DMS Fuel Quality / Metrology

Kevin Schnepf

No update at this time.

Legal Metrology Standards Hydrogen Fuel Quality and Measurement

Juana Williams

Members are encouraged to review the R139 OIML draft revision.

See details in our July Safety Report here - <http://www.hydrogenandfuelcellsafety.info/july-2017#Update3>.

VII. Open Discussion & Other Issues

Other Issues?

None raised at this time.

VIII. Next Meeting – Wednesday, September 6th at 3:00 PM Eastern